

WHOEVER advises the New Jersey farmer not to take any "wooden nickels" knows not whereof he advises—and his advice does the farmer not one sliver of good. Verily, that day of refusing such nickels has passed; the wise farmer looks hard at that woodlot on the hill and before his very eyes it becomes nickels, nay dollars—nay, millions of dollars.

Not all farmers can see these dollars on the stump. It takes a special kind of imagination, a special willingness to heed sound advice, a special ability to see that good woods management can mean a steady chunk of dollars made from wood. Sometimes a farmer even scoffs at the notion that management of his woodlots is agriculture at all.

Farm dollars chipped from the woods are difficult to figure exactly. Census takers in 1950, for example, found only \$209,000 worth of wooden

Chips Are Blue for Farmers of Jersey Who Realize Some \$4,000,000 Annually From One-Fifth of State's Two Million Acres of Woodland

income on Garden State farms—but there is evidence that either the farmers or census takers suffered from something akin to not being able to see the forest for the trees. The fact is that each year New Jersey farmers pick at least three and a half million to four million dollars from their trees, according to those in a position to know.

THAT'S a lot of wooden nickels, particularly since it's money to be piled up in off seasons when snow covers the fields and pastures. Yet the potential hasn't even been tapped. New Jersey has close to 400,000 acres of woodlot on bona fide farms; only a pitifully small fraction of that—maybe 20 per cent—is being used to full potential.

Over and above the actual farm

woodlands, New Jersey in this advanced stage of industrial civilization is still 46 per cent in forests—nearly all of that aching for good sound management. For good sound farm management, at that; for planned replanting, judicious thinning, careful harvesting, thoughtful marketing. The agriculturist, not the woodchopper, can save the woods—and thereby profit both himself and posterity.



Powered saw simplifies work for professional tree cutters on farm woodlot. Most of cutting in New Jersey is supervised by timber agents.

THE GARDEN STATE

TREASURE from TREES

By JOHN T. CUNNINGHAM

Cry of "tim-ber" echoes in Jersey wood as toppling giant is guided in fall to avoid damage to smaller trees in its path.

Woodlands cover upward of two million acres in the state—1,300,000 acres of pine land in South Jersey, more than 700,000 acres of hardwood in North Jersey and along the Delaware River in a 20 to 25-mile strip from Mercer to Salem counties. But, for the present purpose, consider only the 400,000 wooded acres on farms. The 1950 census showed woodlots on 10,960 New Jersey farms, with 10 counties having more than 15,000 acres of farm forest. Burlington and Sussex counties both have more than 35,000 woodland acres; Cumberland, Hunterdon, Monmouth and Warren all have well over 25,000 acres each.

ACTUALLY, of course, no man could make a living by placing little acorns in the soil and then waiting for them to become mighty oaks. Trees aren't like beans; they take 50 to 100 years instead of a few weeks to reach full market value. Thus, farmers don't

get wooden nickels by starting with acorns. Instead, they manage what they have.

Nevertheless, proper management of the woodlot calls for a high regard for posterity. Today's well-managed New Jersey farm woodlots will be far more valuable three decades hence than they are today. That takes a powerful lot of faith in a yet-unborn generation.

If the grandfathers of today's farmers had shown any regard for the forests, however, the agricultural income from wood in 1955 probably would be five to 10 times what it is. Unfortunately those grandfathers inherited a philosophy that trees were ment to be slashed at will; while they agreed with the poetic sentiment that only God can make a tree, they set about proving that no one could destroy them more relentlessly than civilized man.

Wanton destruction of forests began back in Colonial days, but the

This is the 13th in a series of articles on New Jersey's highly diversified agriculture, vigorous and growing despite the constant inroads of industrial and residential development. Next week: Unusual types of farms, including bee keeping and sod growing.



An excellent example of a well-kept woodlot is stand of pine trees in South Jersey—one of America's remaining frontiers.

effects didn't become fully apparent until about 1885. Shipbuilders hewed unmercifully at the South Jersey pines as through the years they brought out masts and planks for everything from Revolutionary War sloops to Civil War battleships.

AT the same time ironmasters ripped and tore through woodlands from Sussex to Cape May gathering fuel to convert South Jersey bog iron and North Jersey iron ore into swords and plowshares. A single North Jersey forge fire consumed 1,000 acres of forest annually—and in 1834 New Jersey had 108 forges. Already the savagery in the woods had taken its toll; many of the forges were close to failure by 1830.

Then steamboats whistled around the bend and railroads shrieked o'er the land. The ring of axes sounded day and night. Thomas Gordon said of steamboats in 1834: "Their huge maws, though fed with thousands of shallop loads of pine wood, were insatiable." Much of that pine came from New Jersey. Likewise the iron horse chomped through the forests, ripping down trees for his railroad ties and consuming any kind of wood he could get in his burning stomach.

Anthracite momentarily helped ease the slaughter of the forests after 1850, but only in the hardwood stands. As Gordon pointed out in his 1834 Gazetteer, "vast quantities of charcoal were required to ignite the fossil."

Every year tremendous forest fires blazed unchecked through the woodlands—set by makers of charcoal, by spark-throwing locomotives, by careless hunters, by arsonists, by farmers burning fields in a high wind. America became greater and greater, and few reckoned the shocking cost in devastated forests; the feeling always persisted that when eastern forests disappeared the nation could move over the Rockies.

A WEE voice began to cry out here and there in the 1880s, and reached the roar of a bull moose during the Presidency of conservation-minded Teddy Roosevelt. New Jersey moved cautiously along. The Legislature ordered a special survey of the forests in 1894, got a recommendation in 1895 that a state forester be appointed, and leisurely waited until 1907 to appoint said forester.

Certainly farmers couldn't be blamed entirely for the holocaust in the forest, but they had lent a hand.

Many of them regularly took portable steam sawmills into the woods during the winter and sawed planks and beams for the use of themselves and their neighbors. They cut huge stacks of wood for parlor stoves and kitchen ranges. They cut railroad ties and fence posts.

Some farmers stepped briskly into the conservation march. In 1902 the State Board of Agriculture invited

F. R. Meier, a pioneer consulting forester, to tell of his experiences with a 3,000-acre forest on a huge farm near Mahwah in Bergen County. Meier lectured at five board-sponsored Farmer Institutes, stressing two facts: "forestry is a branch of agriculture" and "nothing is more neglected (than forestry) on the farm."

MR. MEIER'S 1902 talks have value for the 1955 farmer. He pointed out that wood can be a crop, just like hay or vegetables. But, he added, "the farmer does not study the productive capacity of his woodlot as he does his fields and pastures." Still and all Mr. Meier admitted that when he took over the Mahwah tract in 1894, "people looked on me as sort of a crank, who would not let them cut down a single tree or who would raise trees on worthless soil."

Three years later, Mr. Meier had something more tangible to report. Ten years of managing the Mahwah forest had ended. Mr. Meier had dutifully followed the instructions of the owner: "I don't want a park; make me some money." Mr. Meier did just that. By cutting 300 acres a year, he covered the entire tract fully in 10 years and had netted \$14,000 over and above all expenses, including taxes and land cost. That figured to be about 50 cents an acre a year—about 5 per cent on the original investment. Even railroad stocks weren't doing much better.

Mr. Meier's farm audiences listened politely, but few took his words to heart; certainly, at any rate, not to the heart of their forests. The State Department of Conservation and Development, organized in 1915, pushed sound forestry practices with only moderate success. In those early days state foresters spent most of their time and state funds on developing forest fire control, putting worst things first.

THE traditional cut-and-slash treatment of the woods went on apace. Great forests fell before ax and saw, leaving only stubble and briar patches. Then Nature lent a cruel hand by touching the state's splendid chestnut forests with a withering, sickening blight in about 1906. Slowly the blight spread, until by 1915 scarcely a chestnut remained alive in New

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Cut on Salem County farm near Pennsville, these eight 350-year-old white oaks gave 31,000 board feet of lumber in 40/45 foot lengths.

JERSEY FARM FORESTRY

(Continued From Preceding Page)

Jersey. Instead of beautiful and useful green chestnut forests, gaunt wooden skeletons stretched over the north Jersey slopes.

Agriculture became more and more specialized in New Jersey, and at about the same time coal and oil began to replace wood in farm furnaces. Fewer and fewer farmers visited their woodlots for any reason other than to seek a strayed cow or to cut a few fence posts. By 1925 it could be said that the "old days" of long winter hours in the woods had begun to disappear. At the same time, ever-shrinking farm acreages left more and more old pasturelands to make the long, slow return from cleared land to scrubby woodland.

Depression days turned farmers back to the woods, but most had lost the old knack. Generally they called in a logger, asked him what he would bid for their trees and took what they could get. Thus, farm woodlands were "mined" rather than managed. The average logger, left to his own devices, felled and carted away as many trees as possible with complete disregard of the woodland future.

FARMERS by the 1930s were familiar with a tall lanky forester in the State Department of Conservation, hired in 1926 and told "go out and help the farmer." The forester, Elwood C. ("Slim") Moore, quickly earned the liking and respect of farmers—but despite that most of them continued selling their forests with only casual regard for his repeated appeals that he be permitted to help.

Mr. Moore made one significant step ahead in 1937 when he convinced an estate owner in Gladstone that he (the owner) could get more money for his wood if Mr. Moore could be permitted to estimate the amount and value of timber in the forest and mark the trees that should be cut. The manager of the estate, Amzi Hoffman, sold these marked trees to a logger and made far more than the owner figured possible.

Mr. Moore asked Mr. Hoffman if he would like to be a timber agent to help other farmers in his spare time. Mr. Hoffman agreed, and since then he and other state-approved timber agents have continued to serve farmers or any one else desiring to sell trees. Contacted through the county agricultural agent or through the State Department of Conservation and Economic Development, timber agents handle all details of a timber sale—including a performance bond by the logger. Such sales are based on the markings of state foresters, who mark in a way that will allow both timber cutting and sound future growth.

Mr. Moore and the agents slowly gathered some impressive statistics to show farmers. In 1943, Mr. Moore urged a Burlington County farmer to let the timber agent handle his sale. The man refused, and disposed of 240,000 board feet of lumber for \$2,800. Soon after, a timber agent

negotiated sale of 236,000 board feet of lumber on a farm a few miles away and cleared \$6,800. The sharply contrasting prices for the same type and amount of lumber made a nice easily understood sales talk for sound forestry practices.

WORLD War II accelerated the demand for all timber, and threw into sharp relief one startling fact—that only two places in the United States sell timber at full length, New Jersey and the Hudson Valley. Timber from other areas is cut into 16-foot lengths. This state's long timbers, 40 feet and more in length, found many uses in the shipyards of New Jersey and nearby states. Cutting in the Jersey woods picked up apace; many a New Jersey farmer succumbed to tempting offers.

Often the state foresters mourned indiscriminate cutting. Not the cutting alone, mind you, but rather the cutting with no thought of the future. Besides they could prove to farmers that time after time the sale of timber without advice not only led to ruined woodlots; it also led to losses in revenue to the farmer of from 100 to 500 per cent. Many a New Jersey woodlot slashed over in the years from 1940 to 1945 won't be covered with marketable timber again for 80 to 90 years—if ever.

Contrast that with a case study of a Mercer County farmer. In 1942 he contacted his county agent, got the help of the state forester and a timber agent. He sold timber from a 17-acre woodlot for \$1,560, contrasted with \$1,000 offered by a logger. The logger, quite naturally, would have been interested only mildly, if at all, in conservation. There would have been no forest left, in short.

Then, in 1953 the same Mercer farmer again sought and got state advice. The same 17 acres this time yielded another \$1,580—a total of \$3,140 in 11 years. And best of all, the woodlot is still intact and should be good for another cutting in 15 or so years.

AS the Department of Conservation moved ahead with its program, the state foresters worked closely with the Agricultural Extension Service at Rutgers and through the county agricultural agents. Rutgers turned closer attention to forestry in 1924 after the Clarke-McNary Act of Congress made \$1,500 available to the state for farm forestry extension. The state put up a similar amount and on August 15, 1925, Earl L. Scovell became part-time forestry specialist.

Mr. Scovell took groups of farmers on tramps through woodlots, showing them the unsuspected values of those idle acres. His most important impact on farm forestry came, however, through his organization of 4-H Club forestry groups. The 4-H project started in 1926 with two clubs and 37 members in one county; by 1930 it had grown to 120 clubs and 2,921 members in 11 counties. Many a full-fledged New Jersey farmer of 1955 earned his present-day respect for the



Inspecting 8-year-old Norway spruce on Reichard farm in Mercer County. Christmas trees are expected to bring the farmer \$100 an acre. BELOW: Measuring trunk for estimate of board feet in tree.





LEFT: John R. Caines measuring amount of pulp wood on his storage lot in New Egypt. Jersey farmers get \$400,000 from pulp wood.

woods as a boy in those clubs of a quarter century ago.

Farm forestry became a full-scale Rutgers concern in 1938, when the department of forestry was officially organized at the College of Agriculture. Austin N. ("Dick") Lentz, who has been extension specialist in forestry for 10 years, is currently most active in bringing the story of wooden dollars from campus to the farmer.

Mr. Lentz and Slim Moore work closely together in pushing forestry on the farm. Both are immensely disturbed whenever wood products are listed as "miscellaneous" sources of agricultural income ("along with the honey and salt hay"). They are joint authorities for the estimate that forestry now means seven and a half million dollars income in the state—about four million dollars of that going directly to the farmer.

THE farm income figures break down like this. Saw timber, some 30 million board feet of which is cut annually in New Jersey, is worth three million dollars overall. Of that, about half goes to the farmer (including what he saves by cutting his own saw timber for use on the farm). He gets about \$400,000 from pulp wood, about \$400,000 from firewood, about \$700,000 from Christmas trees and about \$100,000 each from charcoal and piling. The rest of the four million dollars is spread over fish pond poles, basket wood, mine timbers, sawdust and so on.

Several of those items are worthy of closer analysis. Mr. Lentz and Mr. Moore estimate that New Jersey farmers each year use some 500,000 board feet of timber from their woodlots for farm buildings—barns, other out-buildings, even some farm houses. One Sussex County farmer, by way of illustration, used 90,000 board feet of lumber from his own land last year to rebuild a burned barn. Obviously such "home-grown" lumber saves the farmer a great deal of money.

Mr. Lentz feels that firewood is destined to become a big and easily-harvested item for the New Jersey farmer. For one thing, most new homes of today have fireplaces built for steady use—and firewood is something the average urban dweller must (and will) buy. Many New Jersey farmers have started to sell wood at roadside stands, at one dollar a bundle sized to fit an automobile trunk.

Firewood can be sawed from waste trees, fallen branches, toppings from big trees hauled away for lumber, and windfall trees. It doesn't have to be straight, free from knots, beautifully grained. As long as it burns satisfactorily it can sell for fireplace use. Mr. Lentz thinks the present \$400,000 annual sales of firewood can be doubled or more in New Jersey.

ANOTHER item seemingly destined for bigger things is the growing of black locust for fence posts. In Warren County is exhibit A, Ben Kirdzik of Great Meadows, recently called the "king of the locust growers." Mr. Kirdzik, who grows vegetables in the muck land of Great Meadows, started harvesting fence posts in 1949—cutting 3,000 posts that year and selling them for anywhere from 50 cents to \$1.50 each. He figures his posts will yield him about \$100 an acre a year.

Fence posts now mean an estimated \$360,000 to New Jersey farmers every year. They are expensive to buy, good to sell—and, best of all, black locust gets big enough to harvest within 10 to 15 years after planting seedlings. That isn't too long to wait, particularly since the locusts can be grown on fields not fit for anything else.

POSSIBLY the biggest potential of all, however, is the Christmas tree. After all these years New Jersey farmers have caught on in full measure to the prophetic words of Dr. John Gifford, Cornell University professor, who in 1901 told the State Horticultural Society:

"The time is coming when it will pay farmers to raise Christmas trees. People in the United States pay two million dollars for Christmas trees annually."

Now, of course, New Jersey families alone undoubtedly spend well in excess of two million dollars every holiday season for Christmas trees. Fifteen years ago practically none of that went for state-grown trees; now at least \$700,000 is expended for Norway spruce or pine trees grown on more than 100 New Jersey farms. It is estimated that some two million Christmas trees are at or near marketable age in the state.

The number of sales of New Jersey Christmas trees is certain to mount sharply. Markets are good, prices high (an average retail price of \$3 a tree is likely). Three-year-old seedlings can be bought inexpensively from the state nursery at Washington Crossing and they can be grown on rough, hilly land. Cutting for market can start at the end of six to 10 years, and it's not out of line to figure Christmas trees will earn the farmer \$100 an acre a year.

Indeed, the demand among farmers for Christmas trees is so great that New Jersey now has five tree planting machines—two in Hunterdon County, and one each in Warren, Monmouth and Salem counties. State foresters are helping farmers plan layouts for areas of upwards of 10 acres, so that when the trees start to hit marketable age a regular annual source of income will be available. Hunterdon County alone plants some 350 acres in Christmas trees every year (at the rate of about 1,200 trees an acre).

THE State Nursery was established by the Department of Conservation and Economic Development in 1926. It now supplies about one and a half million three-year-old seedlings every year to farmers and landowners who have at least 10 acres of land available. About 60 per cent of all seed-

lings distributed are Norway spruce (for Christmas trees), another 150,000 are black locust seedlings with the rest divided among white pine, Austrian pine, larch, hemlock and oak. In 1952, county agricultural agents estimated that 100,000 farm acres now left idle should be replanted in trees; the state nursery stands ready to help.

Unquestionably interest in farm forestry is mounting, and not solely because of the possibility of quick dollars and cents. Farmers know that proper management of their woodlots can enhance the beauty of their farms, can help hold soil and moisture in place, and can preserve a valuable legacy to pass on to future generations.

There is still much to be accomplished, however. One stumbling block is the relative unfamiliarity of modern farmers with wooded properties. Unlike their grandfathers, who worked in the woods of necessity in the winter months, most of today's farmers have only moderate knowledge of how to wield an ax or fell a tree. Not that they have to know how to fell a 100-foot oak anyway; all they have to do is recognize the value of their timber, and the county agent can start them on their way to wooden dollars.

TOUCHED on only briefly here because it is far from the concern of farmers alone is the vast 1,300,000-acre pine land of South Jersey. Foresters figure that the region now yields only a tenth of what could be realized under proper management. Present wood cuttings are appallingly low in the Pines, the result of nearly three centuries of gross mismanagement and countless centuries of devastating forest fires. The Pines remain one of America's frontiers; it's probable that agriculturists could do an excellent job of improving the wood output if that land was in the hands of farmers interested in woods management.

But the Pines are a story in themselves—a dozen stories, a hundred stories. For the present, the farmer has enough to think about in his 400,000 acres of upland farm woodlot, most of it (possibly 80 per cent) still either mismanaged or, worse, completely ignored. It's still hard to sell the average farmer on the philosophy that his woodlot (which, by the way, averages some 20 acres a New Jersey farm) is just another field. Just another field, capable of producing another harvest every year.

There's enthusiasm aplenty in Trenton and New Brunswick and on scattered farms for the wooden nickels to be cut from the farm forests, but enthusiasm won't mean good forests unless it gets in all farmers' hearts. If the forest enthusiasts ever get their message across to all farmers, there's no telling how high the wooden harvest might mount.